DIGITAL PHYSICIAN
Waist-High Scale
Model 8430 Series
Operating Instructions

8525-M041-O1 Rev L
02/15

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FCC COMPLIANCE STATEMENT

This equipment generates uses and can radiate radio frequency and if not installed and used in accordance with the instruction manual, may cause interference to radio communications. It has been tested and found to comply with the limits for a Class A computing device pursuant to Subpart J of Part 15 of FCC rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment. Operation of this equipment in a residential area may cause interference in which case the user will be responsible to take whatever measures necessary to correct the interference.

You may find the booklet "How to Identify and Resolve Radio TV Interference Problems" prepared by the Federal Communications Commission helpful. It is available from the U.S. Government Printing Office, Washington, D.C. 20402. The stock no. is 001-000-00315-4.

PROPER DISPOSAL

When this device reaches the end of its useful life, it must be properly disposed of. It must not be disposed of as unsorted municipal waste. Within the European Union, this device should be returned to the distributor from where it was purchased for proper disposal. This is in accordance with EU Directive 2002/96/EC. Within North America, the device should be disposed of in accordance with the local laws regarding the disposal of waste electrical and electronic equipment.

It is everyone's responsibility to help maintain the environment and to reduce the effects of hazardous substances contained in electrical and electronic equipment on human health. Please do your part by making certain that this device is properly disposed of. The symbol shown to the right indicates that this device must not be disposed of in unsorted municipal waste programs.

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DISCLAIMER

While every precaution has been taken in the preparation of this manual, the Seller assumes no responsibility for errors or omissions. Neither is any liability assumed for damages resulting from use of the information contained herein. All instructions and diagrams have been checked for accuracy and ease of application; however, success and safety in working with tools depend to a great extent upon the individual accuracy, skill and caution. For this reason the Seller is not able to guarantee the result of any procedure contained herein. Nor can they assume responsibility for any damage to property or injury to persons occasioned from the procedures. Persons engaging the procedures do so entirely at their own risk.

Serial Number_____

Date of Purchase _____

Purchased Form_____

_____

_____

RETAIN THIS INFORMATION FOR FUTURE USE

PRECAUTIONS

Before using this instrument, read this manual and pay special attention to all "NOTIFICATION" symbols:

IMPORTANT

INTRODUCTION

Thank you for purchasing our Detecto Model 8430 Series Digital Physician Waist-High Scale. It has been manufactured with quality and reliability at our factory in Webb City, MO USA. Your scale has been tested before leaving our factory to insure accuracy and dependability for years to come.

This manual is provided to guide you through the operation of your scale. Please read it thoroughly before attempting to operate your scale and keep it handy for future reference.

SPECIFICATIONS

Capacity …….…….……	550 lb x .2 lb (250 kg x .1 kg), selectable
Platform Size ……..…...	10.5” x 14.5” (267 mm x 368 mm)
Shipping Weight ……..….	34 lb (15.4 kg)
Scale Height ……..	37.5” (953 mm)
Height Rod Measures …..	8430/8430S - 30” to 78” (76 cm to 200 cm) x 1/4 inch (1/2 cm)
	8431/8431S - 30” to 78” (76 cm to 200 cm) x 1/4 inch (1/2 cm)
	8430M, 8431M - 30” to 78” (76 cm to 200 cm) by 1/4 inch (1 mm)
Display ……..……..	Weight: 5 digit, seven segment, 7/8” (22.23 mm) high LCD
	Height: 4 digit, seven segment, 1/2" (12.7 mm) high LCD
	BMI: 3 digit, seven segment, 1/2" (12.7 mm) high LCD
	ID: 14 digit, 14 segment, .35” (8.89 mm) high LCD
Power …….....	6 “C” cell Alkaline, Ni-Cad or NiMH batteries (*not included*) *OR* an optional 12 VDC 1.25A wall plug-in AC power adapter (Cardinal part number MV1PWR).
Keyboard	Membrane type with 19 keys, On/Off, Zero, Units, Lock/Release, Net/Gross, Tare, ID/Height, Clear (Backspace), Print/Enter and 0-9 Numeric Keys

UNPACKING INSTRUCTIONS

- Remove scale from carton by lifting up with equal force from column and platform base.
- Check for any damage incurred in shipping. If scale has been damaged, place a claim with the carrier. Use the original carton and shipping material to return the scale.
- Remove all plastic wrapping, foam fillers and cardboard material from the scale.
- Carton contents:

    1) Column
    2) Indicator
    3) Platform base
    4) Screws and lock washers
    5) Height measuring rod - optional
    6) Wheels - optional

NOTE! If column bracket is bent, straighten before assembling.

ASSEMBLY INSTRUCTIONS

Refer to Figures No. 1, 2, 3, and 4, then follow the instructions for scale assembly.

1. Carefully remove load cell and draft rod assembly from column.

   IMPORTANT! Handle load cell assembly with care! Do not drop, bend or twist.

2. Slip column over column bracket on platform base. Screw column to column brackets (two 1/4 truss head screws in front of column and four in the back). See Figure No. 1.

3. Referring to Figure No. 2, remove both #10-32 Truss Head Screws and lock washers securing the indicator bracket to the column.

4. Lower load cell and draft rod assembly into column. Draft Rod must pass through opening in column bracket. Referring to Figure No 1, make sure open end of lower draft rod hook is facing forward toward platform.

5. Next, referring to Figure No. 3, fasten top hook bolt of load cell assembly (C) to column. Make sure the load cell assembly does not touch the sides of column.

6. Slide grommet away from load cell assembly and slide into slot on column. **NOTE:** The slot should be on back (wide side) of column.

7. Pull excess load cell cable in column leaving enough slack in cable so as not to have any side pull on load cell.

8. Place digital indicator bracket on column and attach with 2 (#10-32) truss head screws and lock washers removed in step 3. See Figure No. 2.

9. Using a desk or table, lay down scale with column horizontal to floor. Raise draft rod keeping out of lever's way. Push lever. When lever is in position, hook draft rod around pivot. See Figure No. 4.

10. Attach indicator to indicator bracket on column, then connect load cell cable to back of indicator. Refer to the MedVue Model MV1 Medical Weight Analyzer Owner's manual, 8555-M512-O1 for additional information.

11. Scale is now ready for operation.

ASSEMBLY INSTRUCTIONS, CONT.

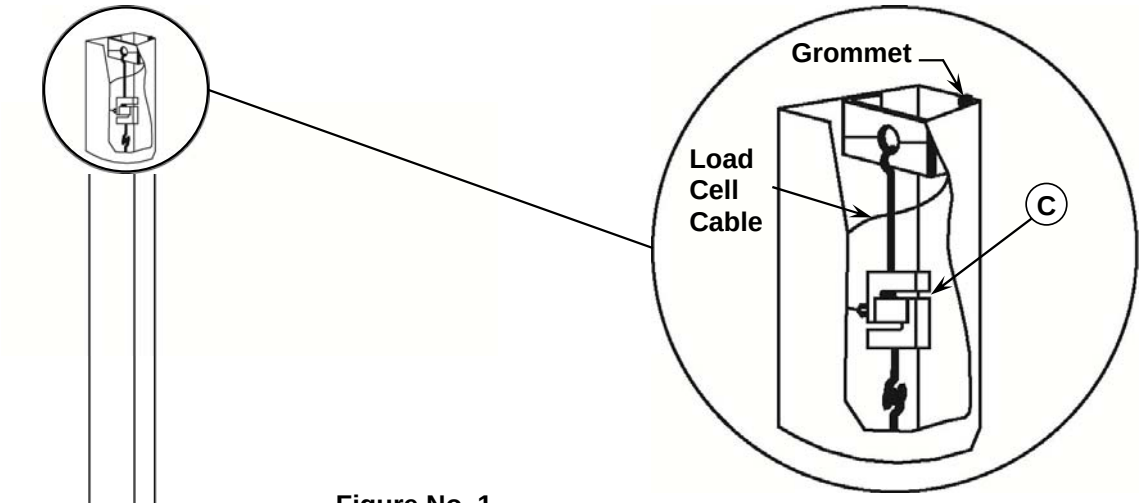


Figure No. 3

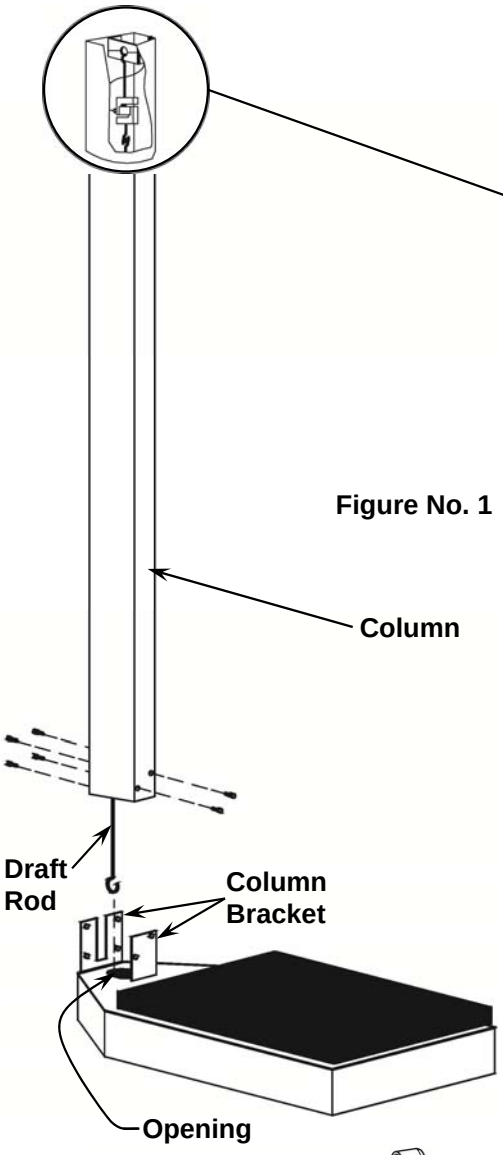


Figure No. 1

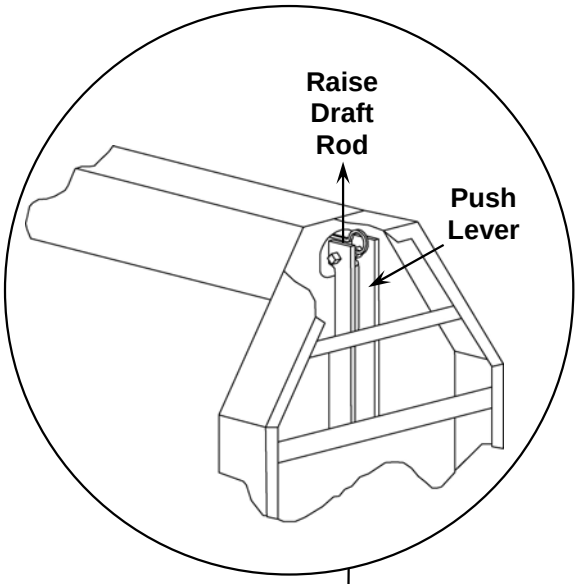


Figure No. 4

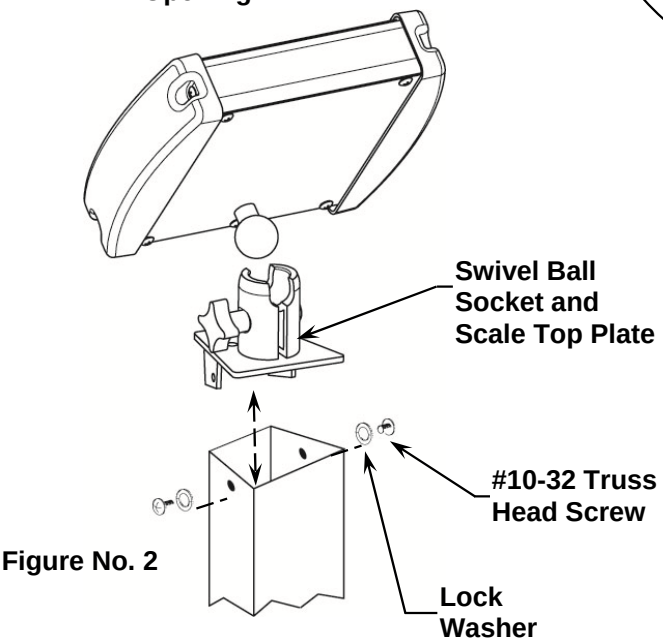
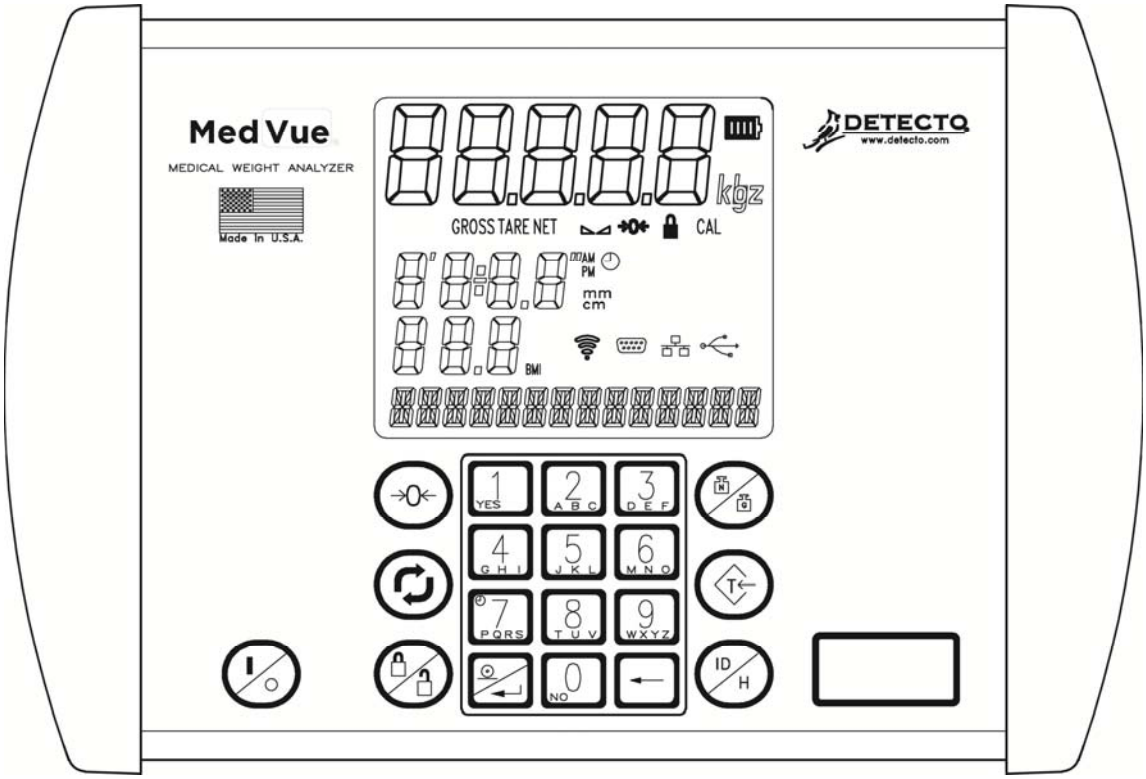


Figure No. 2

OPERATION



MedVue MV1 Keypad

Basic Operation

To Weigh

1. Press **ON/OFF** key to turn the MV1 on.
2. Press **ZERO** key to zero weight display. ZERO, GROSS and lb or kg annunciator will turn on to show that the scale is ready for use.
3. Place patient on scale and read weight display.
4. If a printer is connected to scale, press **PRINT/ENTER** key to print a ticket.
5. Remove patient from scale.

Zero Weight Display

1. In Gross Weight mode (GROSS annunciator on), press **ZERO** key.
2. Weight display will return to zero. ZERO and STABLE ◣◢ annunciators will turn on to show a stable, center-of-zero gross weight condition.

Metric Conversion

Press the **UNITS** key to toggle between pounds and kilograms. The lb or kg annunciator will turn on to show the weighing unit selected. In addition, the height units will change from feet/inches to centimeters. **NOTE:** This is only available if configured in Calibration Setup.

OPERATION, CONT.

Basic Operation with ID – (No BMI)

To Weigh

1. Press **ON/OFF** key to turn the MV1 on.
2. Press **ZERO** key to zero weight display. ZERO, GROSS and lb or kg annunciator will turn on to show scale is ready for use.
3. Press **ID/HEIGHT** key.
4. Display will change to show Id.
5. Using numeric keys, enter up to a 14 digit alphanumeric identification number.
6. Press **PRINT/ENTER** key.
7. Place patient on scale
8. Read weight display.
9. If a printer is connected to scale, press **PRINT/ENTER** key to print a ticket.
10. Remove patient from scale.

Body Mass Index (BMI) Operation – (No ID)

To Weigh and Calculate BMI

1. Press **ON/OFF** key to turn the MV1 on.
2. Press **ZERO** key to zero weight display. ZERO, GROSS and lb or kg annunciator will turn on to show scale is ready for use.
3. Press **ID/HEIGHT** key.
4. If Centimeters was selected for HEIGHT UNITS in setup, the display will change to show CENTIMETERS.
    a. Use numeric keys to enter up to 4 digits (# # # . #) for height in centimeters and then press **PRINT/ENTER** key.
5. If Millimeters was selected for HEIGHT UNITS in setup, display will change to show MILLIMETERS.
    a. Use numeric keys to enter up to 4 digits (# # # #) for height in millimeters and then press **PRINT/ENTER** key.
6. Place patient on the scale.
7. Read weight and BMI displays.
8. If a printer is connected to scale, press **PRINT/ENTER** key to print a ticket. Note that BMI and height display will clear when ticket prints.
9. Remove patient from scale.
10. If a printer is not connected to scale, BMI display will clear when patient is removed from scale and weight returns to zero.

OPERATION, CONT.

Body Mass Index (BMI) Operation with ID

To Weigh and Calculate BMI

1. Press **ON/OFF** key to turn MV1 on.
2. Press **ZERO** key to zero weight display. ZERO, GROSS and lb or kg annunciator will turn on to show scale is ready for use.
3. Press **ID/HEIGHT** key.
4. Display will change to show Id.
5. Using numeric keys, enter up to a 14 digit alphanumeric identification number.
6. Press **PRINT/ENTER** key.
7. If Centimeters was selected for HEIGHT UNITS in setup, the display will change to show CENTIMETERS.
    a. Use numeric keys to enter up to 4 digits (# # # . #) for height in centimeters and then press **PRINT/ENTER** key.
8. If Millimeters was selected for HEIGHT UNITS in setup, display will change to show MILLIMETERS.
    a. Use numeric keys to enter up to 4 digits (# # # #) for height in millimeters and then press **PRINT/ENTER** key.
9. Place patient on the scale.
10. Read weight and BMI displays.
11. If a printer is connected to scale, press **PRINT/ENTER** key to print a ticket. Note that BMI, ID and height display will clear when ticket prints.
12. Remove patient from scale.
13. If a printer is not connected to scale, BMI display will clear when patient is removed from scale and weight returns to zero.

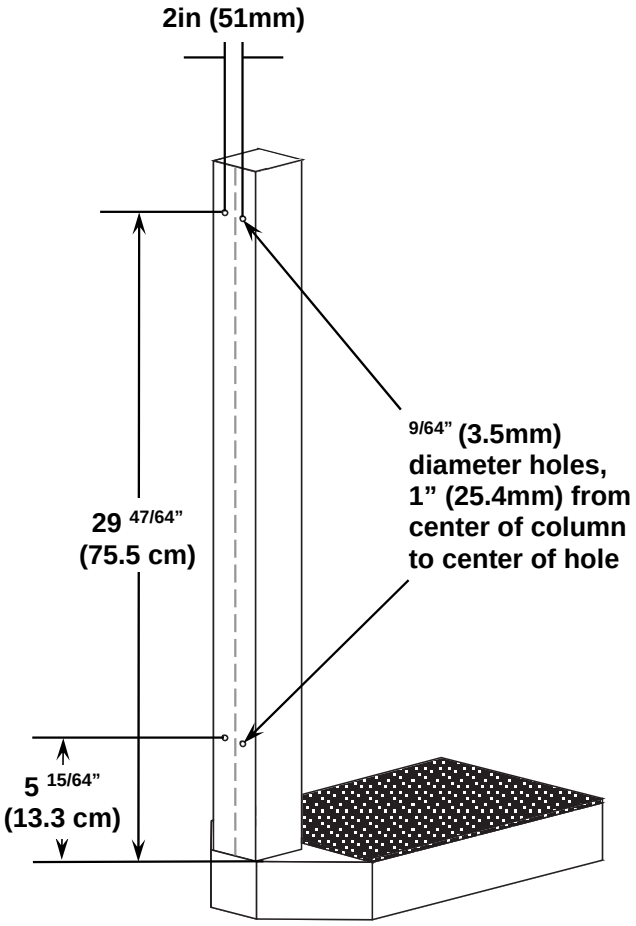
HEIGHT ROD INSTRUCTIONS

Height Rod Hole Location

Please check the Height Rod hole locations before installing the Height Rod.

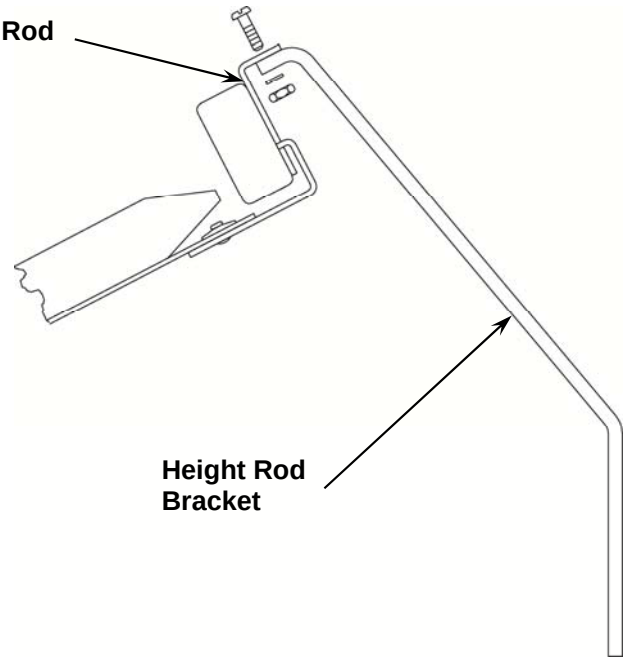
- **Some scales may require holes to be drilled.**
- Please follow the measurements for drilling holes if necessary.
- After holes have been drilled, please follow installation instructions.

IMPORTANT!
Measure from bottom of column, not floor or scale base.



Height Rod Installation

1. Remove the height rod, height rod brackets and hardware pack from the cardboard insert.
2. Attach the height rod brackets to the height rod using the four screws, lock washers and nuts enclosed in the hardware pack. Tighten all four screws.

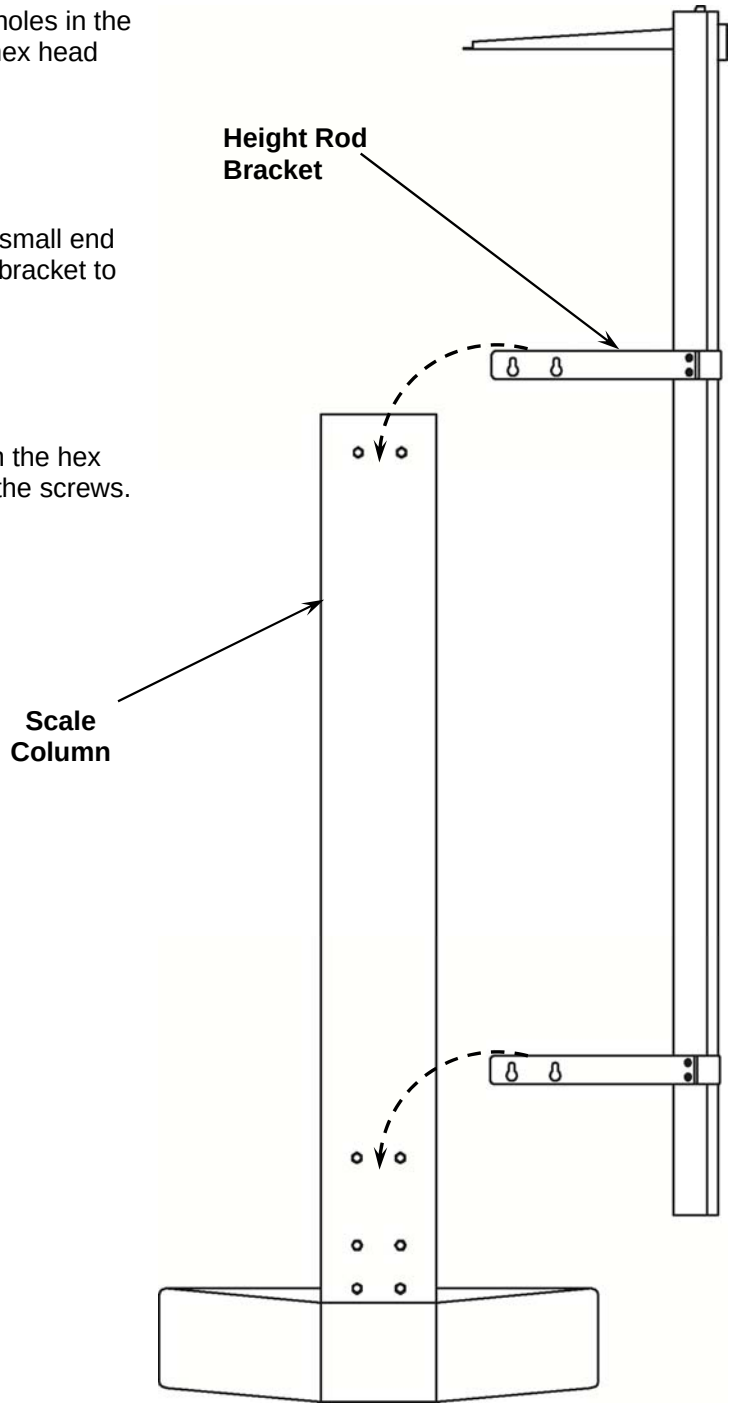


HEIGHT ROD INSTRUCTIONS, CONT.

3. Place the large end of the slotted holes in the height rod brackets over the four hex head screws on the back of the column.

4. Pull down to set the screws in the small end of the slotted hole and secure the bracket to the column.

5. Use the included wrench to tighten the hex head screws. Do not over-tighten the screws.



HEIGHT ROD INSTRUCTIONS, CONT.

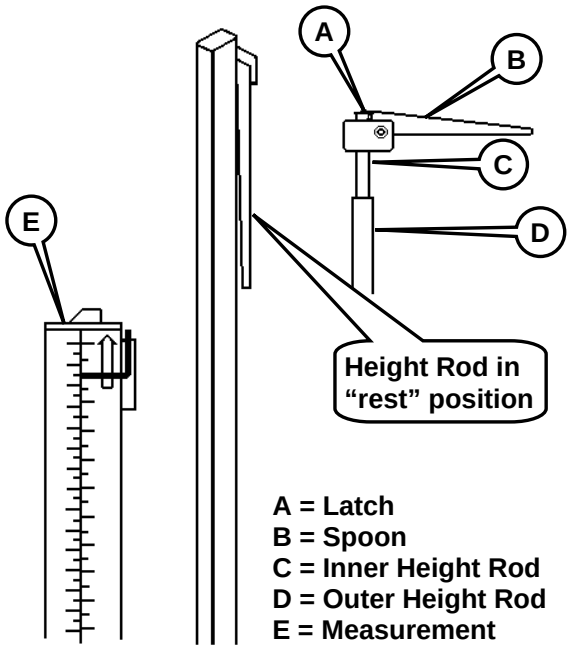
Height Rod Operating Guide

1. Before patient steps onto scale platform, spoon (B) should be rotated to horizontal position, and raised well above patient's apparent height.

2. Patient may now step onto scale platform. Spoon (B) should be held horizontal and above patient's head.

3. Carefully lower spoon (B), keeping it horizontal, until it rests gently on top of patient's head. If patient is shorter than 3' 4" (101.5 cm), push latch (A) to right while simultaneously pushing down on spoon (B), until the spoon (B) rests horizontally on top of patient's head.

4. Read height of patient as follows:
   - If back of spoon points to outer height rod, then it points to correct height.
   - If back of spoon points to inner height rod, then correct height is read at top of outer height rod (see "Read" arrow on outer height rod)...



A = Latch
B = Spoon
C = Inner Height Rod
D = Outer Height Rod
E = Measurement "Read" Line

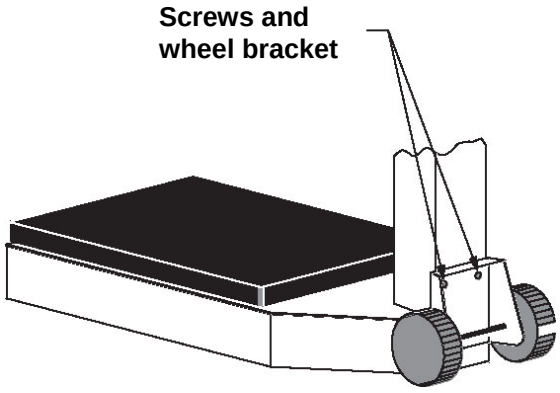
5. While holding spoon (B) horizontally, raise spoon (B) above patient's head. Patient may now step off scale platform. Hold spoon (B) horizontal until patient is clear of height rod.

6. Rotate spoon (B) back to vertical position and adjust height rod back to rest position (i.e. spoon (B) should be locked in place within inner height rod (C) and inner rod should be at its lowest position).

OPTIONAL WHEELS INSTALLATION

How to Setup the Scale with Roller Wheels.

1. Remove the two lower screws in the back of the column.
2. Place the wheel bracket against the back of the column and align the holes in the bracket with the holes in the column.
3. Install the two screws removed in step 1, securing the wheel bracket to the column.



ERROR AND STATUS DISPLAYS

Display	Meaning
ERROR	General error, invalid keypad entry was attempted.
ERR OVERFLOW	Attempting to display a negative number greater than –9,999 or a positive number greater than 99,999
ERR ZERO LIM	Indicates an attempt to zero a weight outside scale zero range. Refer to the Calibration Setup **ZERO** Menu, **ZERO LIMIT** (Two Percent Zero Tracking Range Limit) parameter.
ERR UNSTAbLE	Motion is present when MV1 is attempting to perform one of the following operations: Power Up Zero or Zero Weight Display
OVER CAPACITY	Scale weight exceeds scale capacity.
	When the batteries are near the point they need to be replaced (Alkaline) or recharged (NiCad or NiMH), the battery status symbol will not show any bars. If the battery voltage drops too low for accurate weighing, the MV1 will automatically shut off and you will be unable to turn it back on.
CAL REQUIREd	Indicates improper stored calibration data. Calibration of MV1 is required. Consult your scale service representative.
ERR ANALOG	An analog to digital convertor communication error has been detected. Consult your scale service representative.
ANALOG LOW	The load cell input is below the range of the MV1. Consult your scale service representative.
ANALOG HI	The load cell input is above the range of the MV1. Consult your scale service representative.
ERR EEPROM	NOVRAM failure. Consult your scale service representative.

CARE AND CLEANING OF SCALE

Powder Painted Steel

While powder painted steel is attractive and so durable that it will last many years longer than ordinary painted steel, it is desirable to clean it thoroughly on a routine basis. There are three basic things that should be remembered when cleaning powder painted steel.

1. Do not use wire brushes, abrasives, or cleaning tools such as steel pads and scrapers, which will scratch the painted surface. Instead, use soft cloths or plastic scouring pads.
2. When possible use treated water. Hard water can leave behind deposits. Soft water is much gentler on the painted steel's surface.
3. Avoid the use of acetone, thinner or other volatile solvents and abrasive type cleaners for cleaning. If required, a mild solvent such as mineral spirits can be used to remove oil, grease, tars, wax, and similar substances. Use a cloth dampened with mineral spirits and apply only to areas that are contaminated. Follow up the use of this mild solvent with detergent cleaning and rinsing.

Stainless Steel

While stainless steel is a sturdy and attractive material, it is not incorruptible. Stainless steel is susceptible to rusting. There are three basic things which can break down stainless steel's outer layer and allow corrosion.

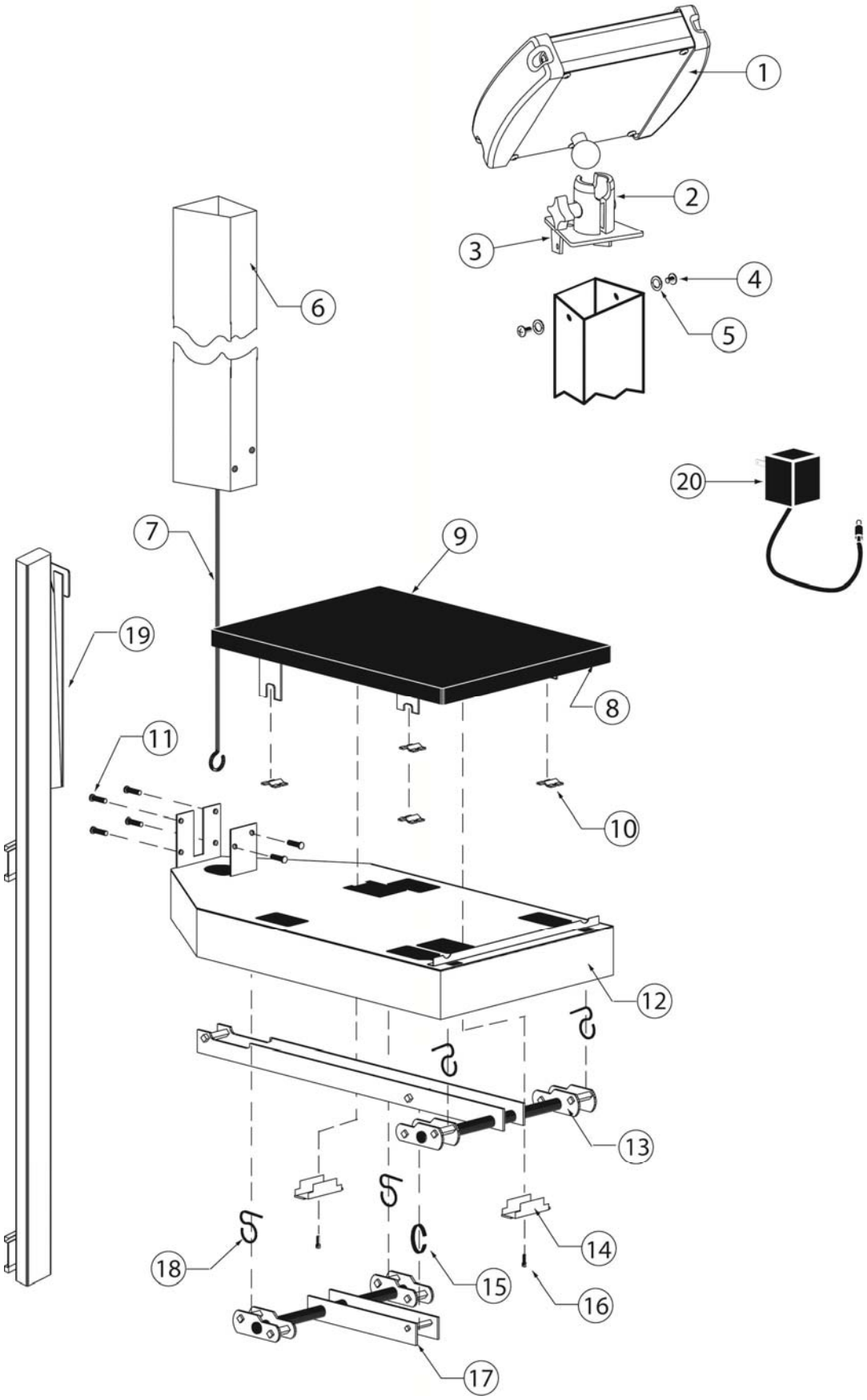
1. Mechanical abrasion - those things which will scratch the steel's surface, such as steel pads, wire brushes and scrapers. Instead, use soft cloths or plastic scouring pads for cleaning and brush with the polish line or "grain.
2. Water - especially hard water which can leave behind deposits. When possible use treated water - soft water is much gentler on the stainless steel's surface.
3. Chlorides - often found in water, food and table salt. One of the worst perpetrators of chlorides can come from household and industrial cleaners, especially those with quaternary salts. Never use hydrochloric acid (muriatic acid) on stainless steel. Instead, use non-chloride cleaners. If chlorinated cleaners must be used, rinse several times and wipe dry immediately.

PARTS IDENTIFICATION

ITEM	QTY	PART NUMBER	DESCRIPTION
1	1	MV1	WEIGHT INDICATOR FOR CLINICAL SCALES
2	1	8555-B519-0A	MEDVUE MTG KIT ASSY
3	1	0033-B104-0A	TOP PLATE, INDICATOR TO 3P
4	2	6021-1045	SCW HEX HEAD #10-32 X 1/2 Z/P
5	2	6024-0049	WASHER LOCK EXT #10
6	1	430XG3R800	COLUMN ASSEMBLY
	1	0033-B315-0A	COLUMN ASSEMBLY FOR 8430S, 8431S, 8437S
7	1	0033-B254-08	DRAFT ROD FOR 8430 SERIES
8	1	3P2011X	PLATFORM WELDMENT
9	1	3P8068	PLATFORM COVER
10	4	3P2087	PLATFORM LOAD BEARING
11	6	6021-1423	SCW TRUSS HEAD MACHINE-SCW 1/4-20 X 1/2
	6	6024-0047	WASHER LOCK EXT TOOTH 1/4" TYPE A Z-PL
12	1	3P1001X	PLATFORM WELDMENT
13	1	3P8002X	LONG LEVER ASSEMBLY
14	2	3P60	CHECK PLATE
15	1	2U58	UNION CENTER HANGER
16	2	6021-1629	#10 X 1/2 HEX HEAD SHEET METAL SCREW
17	1	3P8003X	SHORT LEVER ASSEMBLY
18	4	3P8059	UNION HANGER
19	1	0033-D203-0A	HEIGHT ROD ASSEMBLY, 1/4 INCH (1/2 CM)
	1	0033-D475-0A	HEIGHT ROD ASSEMBLY, 1/4 INCH (1 MM)
20	1	MV1PWR	AC ADAPTER 100-240VAC/12VDC @ 1 AMP
21*	1	709G2R1206	LOAD CELL & MOUNTING ASSEMBLY, Z-100

* NOT SHOWN

PARTS IDENTIFICATION, CONT.



STATEMENT OF LIMITED WARRANTY

Detecto Scale warrants its equipment to be free from defects in material and workmanship as follows: Detecto warrants to the original purchaser only that it will repair or replace any part of equipment which is defective in material or workmanship for a period of two **(2) years from date of shipment**. Detecto shall be the sole judge of what constitutes a defect.

During the **first ninety (90) days** Detecto may choose to replace the product at no charge to the buyer upon inspection of the returned item.

After the first ninety (90) days, upon inspection of the returned item, Detecto will repair or replace it with a remanufactured product. The customer is responsible for paying for the freight both ways.

This warranty does not apply to peripheral equipment not manufactured by Detecto; this equipment will be covered by certain manufacturer's warranty only.

This warranty does not include replacement of expendable or consumable parts. This does not apply to any item which has deteriorated or damaged due to wear, accident, misuse, abuse, improper line voltage, overloading, theft, lightning, fire, water or acts of God, or due to extended storage or exposure while in purchaser's possession. This warranty does not apply to maintenance service. Purchased parts will have a ninety (90) day repair or replacement warranty only.

Detecto may require the suspect product to be returned to the factory; item(s) must be properly packed and shipping charges prepaid. A return authorization number must be obtained for all returns and marked on the outside of all returned packages. Detecto accepts no responsibility for loss or damage in transit.

STATEMENT OF LIMITED WARRANTY

Conditions Which Void Limited Warranty

This warranty shall not apply to equipment which:
A.) Has been tampered with, defaced, mishandled or has had repairs and modifications not authorized by Detecto.
B.) Has had serial number altered, defaced, or removed.
C.) Has not been grounded according to Detecto's recommended procedure.

Freight Carrier Damage

Claims for equipment damaged in transit must be referred to the freight carrier in accordance with freight carrier regulations.

This warranty sets forth the extent of our liability for breach of any warranty or deficiency in connection with the sale or use of the product. Detecto will not be liable for consequential damages of any nature, including but not limited to, loss of profit, delays or expenses, whether based on tort or contract. Detecto reserves the right to incorporate improvements in material and design without notice and is not obligated to incorporate improvements in equipment previously manufactured.

The foregoing is in lieu of all other warranties, express or implied including any warranty that extends beyond the description of the product including any warranty of merchantability or fitness for a particular purpose. This warranty covers only those Detecto products installed in the forty-eight (48) contiguous continental United States.

DETECTO
A Division of Cardinal Scale Manufacturing Co.

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IN U.S.A.